## Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attent copy available for films may be bibliographical of the images in the regisignificantly change the checked below.	ing. Feature ly unique, w production, (	s of this co hich may a or which ma	py which Iter any ay		lui a exem biblic repro dans	été possiplaire constitut a siplaire constitut a si	sible d qui sor que, q ou qui	i peuv	erocu it-êtr uvent rent c	irer. L e uniq t modi exiger	es dé ues d fier u une n	tails do u poin ne ima nodific	e cet t de v ige cation	
Coloured covers/ Couverture de co						Coloui Pages (	•	-						
Covers damaged/					V	Pages (	_		es:					
Covers restored a					V	Pages I								
Cover title missir Le titre de couve	-	ie			Z	Pages ( Pages (								
Coloured maps/ Cartes géographi	ques en coul	eur				Pages of								
Coloured ink (i.e					V	Showt Transp	_							
Coloured plates : Planches et/ou il					V	Qualit Qualit					on			
Bound with other Refie avec d'autr		ts				Contin Pagina				1				
Tight binding ma along interior ma La reliure serrée	argin/			,		Includ Comp				dex				
distorsion le long			ay appear			Title o								
within the text.  been omitted fro  If se peut que ce	Whenever point filming/	ossible, thes	se have			Title p Page d	_			aison				
lors d'une restau mais, lorsque cel pas été filmées.						Captio Titre o			e la li	vraiso	n			
						Masthe Généri		périod	dique	s) de l	a livra	aison		
Additional commentaires su	ıpplémentaiı													
This item is filmed et : Ce document est filmé	au taux de i		idiqué ci-de		,			201				201		
XOI	14X		18X	22)	T	<del></del>		26X		T	T	30×		

28X

24X

Vol. 3.

Toronto and Montreal, Canada, September 3, 1892.

No. 30

### THE CANADIAN CONTRACT RECORD.

PUBLISHED EVERY SATURDAY As an Intermediate Edition of the "Caradian Architect and Builder,"

Subscription price of "Canadian Architect and Builder" (including "Canadian Contract Record"), \$2 per annum, payable in advance.

C. H. MORTIMER, Publisher.

14 KING ST. WEST, . TORONTO, CANADA Telephone 2362.

64 Temple Building, - Montreal, Bell Telephone 2299.

Information solicited from any part of to Dominion regarding contracts open to tender.

ADVERTISING RATES ON APPLICATION.

At its Convention held in Toronto, Nov. 20 and 21, 1889, the Untario Association of Architects signified its approval of the CANADIAN CONTRACT RECORD, and pledged its members to use this journal as their medium of communication with contractors with respect to advertisements for Tenders.

The following resolution was unanimously adopted at the First Annual Meeting of the Province of Quebec Association of Arch. Heets, held in Montreal, Oct. 10th and 11th, 1890 : " Moved by M. Perrault, seconded by A. F. Dunlop, that we the Architects of the Province of Quebec now assembled in Concention being satisfied that the CANADIAN CONTRACT RECORD affords us a direct communication with the Contractors,-Itesolved, that we pledye our support to it by using its columns when calling for Tendera,"

Subscribers who may change their address should give prompt notice of same. In doing so, give both old and new address. Notify the publisher of any irregularity in delivery of paper.

## NOTICE TO Architects, Engineers

## Surveyors.

Being about to publish and having completed the compiling of a

#### Directory of Architects, Engineers and Surveyors in the Dominion of Canada and Newfoundland,

containing an alphabetical and classified Direccontaining an alphabetical and classified Direc-tory of Architects. Civil, Consulting, Electrical, General, Hydraulic, Marine, Mechanical, Mining and Railway Engineers and Land and Lumber Surveyors, and before going to press, the pub-lishers would like to receive the business card or correct name and address of every Architect, Engineer and Surveyor, so that they could verify every name and address they have obtained (over The

### DIRECTORY

will be published during the month of October.

1892. Price, \$2.00. To advance subscribers, \$1.50. Subscribers names are printed in the Classified

Directory.
Send us a postal for our Prospectus Circular.
which will be sent free.
Best advertising medium for supplymen, etc.

## PIGEON & BUREAU, Publishers,

1786 St. CATHERINE St., . MONTREAL.

#### TENDERS

For the various works required will be received up to noon of MONDAY, SEPTEMBER 12TH,

1892, for a Cottage and an Addition to the Pro-testant Hospital for the Insane at Verdun, Que. The lowest or any tender not necessarily ac-cepted. Plans and specifications now on view at cepted. P

WRIGHT & SON, Architects, 204 St. James Street, Montreal,

## Notice to Plumbers and Builders.

Cash Tenders will be received by me at the office of Messrs, Neville, McWhinney & Ridley. 18 and 20 King Street West, on and up to 12th September next, for the purchase of the stock in trade of W. H. Hewlett & Co. (involvent) of 410 College Street, Toronto, Plumbers. Stock list may be seen at the said office of Neville, McWhinney & Ridley, at any time during office hours, and stock may be inspected at 419 College Street.

Dated this 30th day of August, 1892. GEO, H. D. LEE, Assignee.



## NOTICE TO CONTRACTORS.

lenders will be received by registered post, addressed to the City Engineer. Toronto, up to eleven o'clock a. m. of September 13, 1892, for the construction of the following works.

#### CEDAR PAVEMENTS:

Royce avenue, from Symington avenue to avenue.

Perth avenue, from Bloor street to Royce

avenue, Herrick street, from Bathurst street to Lippin-

Edmund street, from C. P. Railway to Royce

avenue.

Lane south of Adelaide street to lane in rear of

Arlington Hotel.
O'Hara avenue, from terminus of pavement to railway tracks

#### CEDAR BLOCK, WITH CONCRETE AND GRANITE TOOTHING IN CENTRE:

High Park avenue, from Roncesvalles avenue to east limit of High Park. COBBLE PAVEMENT.

#### Lane south of Queen street, from Tecumseth to Niagara street MACADAM PAVEMENT: Centre road, Crescent road and South Drive.

PAVING ON TRACK ALLOWANCE ONLY:

Howard Park avenue, from Dundas street to Roncesvalles avenu

CONCRETE WALK:
Queen street, north side, from Yonge street to lames street.

Specifications and forms of tender may be ob-

Specifications and forms of tender may be obtained on and after September 7th, 1892, at the office of the City Engineer.

A deposit in the form of a marked cheque, payable to the order of the City Treasurer, for the sum of 5 per cent, on the value of the work tendered for under \$1.000, and 2½ per cent for the value of the work tendered for over that amount, must accompany each and every tender, otherwise it will not be entertained. All tenders must bear the bona fide signatures of the contractor and his sureties (see: specifications), or they will be ruled out as informal.

The Committee do not bind themselves to accept the lowest or any tender.

cept the lowest or any tender.

JOHN SHAW,
Chairman Committee on Works,
Committee Room, Toronto, Aug. 30, 1892.

## TENDERS

Will be received up to and including Thursday. September 8th, for the erection of  $\alpha$ 

Brick Power House and Car Barn for the Brantford Street Railway Company, in the town of Brantford. Plans and specifications may be seen at the office of the Edison General Electric Co., 77 Bay Street, Toronto.

## Steam Heating.

Scaled tenders addressed to the undersigned and marked "Tenders for Steam Heating, will be received until

### Tuesday, the 20th September next,

for having the County of Oxford House of Refuge, in accordance with plans and specifica-tions prepared for the purpose by the Architects, Messrs, Cuthbertson & Fowler.

Plans, specifications and conditions may be seen and all information obtained from the Architects at their office in Woodstock.

JAMES WHITE,

County Clerk. Woodstock, Aug. 27th, 1892.

USEFUL HINTS.

The art of brick making is supposed to have originated in ancient times with the powerful races found in Egypt, Chalden, and China, in the old world, and in Mexico and Peru in the new. The rums of buildings and tombs left in these countries testfy that they were skilful builders. Rawlinson states that the dimensions of brick baked by the Chaldeans were 114 inches square and 21/2 inches thick, and those of later date 13 inches square and 3 inches thick.

There are no special tests for ascertaining the quality of a varnish. Spreading a thin layer on a sheet of glass, and then observing the character of the film produced on drying, seems all that can be done. It ought to become dry to the touch within eight or ten hours, and not become fissured even when exposed to sunshine during a year; nor should the surface become dull through the appearance of "bloom," caused by the minute exudation of solid fatty acids originating from the linseed oil employed in its preparation.

It is well-known that common putty becomes exceedingly hard with age, which renders the removal of glass from sashes pecuharly difficult. A practical man tells us that he thinks himself lucky if he can take out one pane out of three without breakage. It is stated, however, that the putty may be softened by using a paste of caustic potassa, easily prepared by mixing the caustic alkali, or even carbonate of potash or soda, with equal freshly burnt quickline, which has pre-viously been sprinkled with water, so as to cause it to fall into powder. This is then mixed with water to a paste, and is spread on the putty to be softened. Where one application is not sufficient it is repeated. In order to prevent the paste from drying too quickly it is well to mix it with less water, adding some soft soap

#### CONTRACTS OPEN.

BOIRSTOWN N. B. The Methodist congrega tion are about to erect a new church.

LISTOWEL, ONT. - Messrs. Hay Bros. contemplate enlarging their grain elevator.

BRACKBRIDGE, ONT -It is reported that a new pulp mill is to be erected here by a Mr. Davis

TORONTO JUNCTION, ONT. - It is reported that a large flour mill and elevator will be creeted in this town.

PHERISOTON, ONE Mr. D. Wright contemplates the erection of a two-story brick resi dence at an early date.

COURTRIGHT, ONT. - J. I. Coyle, of this place, will receive tenders until this evening (31d inst .) for building a tock-up.

AMHERSTRURG, ONT. - The Michigan Central Railway Company will shortly commence the crection of a new station.

DIGBY, N. S .- A company is being formed to construct waterworks. It is proposed to pump water from springs to a reservoir.

DERBY, N. B .- Tenders are wanted by the Building Committee until the 10th inst. for enlarging and repairing the Methodist church.

VICTORIA, B. C. The Board of Management of the Protestant Orphan's Home have selected a site for their new building on Hillside avenue

ORILLIA, ONT. On Monday next the rate payers will rote on a by law to raise the sum of \$20,000 for the extension of the waterworks system.

NAPANEE, ONT .- The corporation invite tenders until Sept. 10th, for construction of masonry and timber sub-structure of bridge on Centre st.

LEAMINGTON, ONT -On Mo day last the ratepayers of this place carried a by-law to provide funds for the purchase of an electric light plant.

STRATHROY, ONT .- This town is advocating the construction of an electric train line along the Mount Brydges road to connect with the Canadian Pacific.

SMITH'S FALLS, ONT .- At a recent meeting of the committee of St. John's Church, it was decided to proceed at once with the erection of a new church.

BROCKVILLE, ONT. - A company from this town are preparing to get out inhograph stone in Marmora township, and intend building a mili for the purpose.

WOODSTOCK, ONT. - John Peers, of this town. invites tenders until the 5th inst., for drainage work. - The Council are discussing the advisability of creeting a new fire hall.

MONCTON, N. B. -Mr. D. Pottinger, Superintendent Intercolonial Railway, will receive tenders until the 7th inst,, for the construction of freight sheds at St. John and Newcastle, N. B.

PRESTON. ONT .- A committee appointed to report on the advisability of erecting a market building will report in favor of the erection of a one-story ornamental building, to cost \$2,000.

ST. THOMAS, ONT .- A syndicate has purchased 28 acres of land at Port Stanley, on which they will build a number of cottages. They are also negotiating with an American gentleman to build a summer hotel.

KINGSTON, ONT .- Mr. George Penn will shortly erect an expensive cottage at Thousand Island Park .- It is reported that the Thousand Island Steam Boat company will build a new steamer for river accommodation.

ST. JOHN, N. B. - It is understood that Mr Hanson, of the  $\Gamma$  in a Sarsaparilla Company, will shortly visit the city with a view of selecting a site for a four-story building which the company propose to erect for manufacturing purposes.

GLENORA, ONE, -Mr J. C. Wilson, of this town, intends building a summer hotel here during the coming fall. The building will cost about \$10,000, and will be lighted by electricity. Mr. Wilson also contemplates building a cable railway at the mountain.

OTTAWA, ONT .- Mr. Smith, Deputy Minister of Manne, will receive tenders until the 17th inst for the construction of a wooden lighthouse, with dwelling and outbuildings, on the southern extremity of Giant's Tomb Island, in the Georgian Bay.

HAMILTON, ONT.-The committee appointed to consider the petition for a water supply of the Central Fair Agricultural and Industrial Company, have recommended to council that a six inch water main be laid from Brethour's Corners to the grounds of the company, the cost of which is estimated at \$2,600.—The following building permits have been granted: William Strong, twostory brick dwelling on Ontario avenue, cost \$1,600. Mrs. John Hunter, 2 two-story brick dwellings on Colborne street, between Macnab and Park streets, cost \$2000.

WINNIPEG, MAN.-C. H. Wheeler, architect. has prepared plans for repairs to Jas. Robertson & Co's block which was damaged by fire recently. The cost of execution is estimated at \$5,000.-The City Council has decided to construct a cedar block pavement on 1st street, from Portage avenue to 8th avenue south .- Tenders were asked during the past week for the construction of a number of sewers, the contracts for which have not yet been let .- Hon. Mackentie Bowell was in the city recently to arrange for the construction of new barracks for the Canadian Dragoons stationed here.

MONTREAL, ONT .- Lenders have been called during the past week for the construction of sewers on a number of streets. Contracts for which will be awarded in a day or two.-Permanent sidewalks will be constructed at an early date on St. Catherine street, from Harbor street to De-Lorimer avenue; St. Alexis and Hospital streets. opposite lot cadastral No. 115, West ward. -At a special meeting of the St. James club, held last week, the plans prepared by Messrs. Hopkins for the contemplated improvements, were submitted and approved. The cost of this work is estimated at \$50,000.—Theo. Daoust, architect, will shortly call for tenders for 28 stores and a large theatre for Messrs. Wilson & Frost, to be erected on St. Lawrence street, also for several private residences in this city and surrounding country.

TORONTO, ONT .- The Toronto Public Hall Company, which has recently secured possession of the Academy of Music, is said to have selected a site on Yonge street on which to erect a new theatre, to be fitted up with all modern improvements.-It is reported that Mr. Massey, of the Massey-Harris Company, contemplates the erection of a building for religious and philanthropic purposes at the south west corner of Victoria and Shuter streets, and that he has already secured an option of the property.-Mr. Hamilton, Superintendent of Waterworks states that when the new engines are completed he will recommend that the 2,367 feet of wooden conduit that runs partly across the Island and out into the lake, be changed to steel. The cost is estimated at \$50,000.-The Local Board of Health has decided to ask the council to have all the sewers emptying into the bay, extended to the windmill line.-The agreement between the city and the railway companies regarding the erection of the new Union Station has been signed, and it is stated that the work will be proceeded with at an early date.-The by-law to grant a bonus of \$20,000 to the Toronto and Richmond Hill - Electric Railway was carried by the ratepayers o

the County of York on Monday last, and the construction of the road will now be proceeded with. The main line of the railway will commence at the function of Bathurst street with the C. P. R. tracks, running north about five miles, by way of Spadina road, thence to Richmond Hill. The company also intend to construct a line from east to west on St. Clair avenue.-Ground has been broken at the south west corner of Bloor and St. George streets for an expensive residence.-A sufficiently signed petition has been received by the Council for the construction of a granolithic sidewalk on the west side of Sherbourne street, from Bloor street to Wilton avenue, and tenders will be called for the work .- J O. Orr, Chairman Parks and Gardens Committee, will receive tenders until the 7th inst., for alterations to pavilion at Island Park and for filling in Ingoon neur Lakeside Home for Sick Children. Plans at office of Park Commissioner, St. Lawrence Hall .-- The following building permits have been granted. Francis Ferguson, No. 1 Courtney Place, six det, 2 story and attic bk, dwellings, w. side Cowan ave., s. of King st., cost \$27,000; Urguhart & Smith, it Mansfield ave., pr. s. d. a story and attic bk. dwellings, n. side King st., w. of Beatty ave., cost \$8,000; J. Jennings, 247 Concord st., det. 2 story bk. dwelling, cost \$1,200, Sisters of St. John, 2 story bk. addition to hospital, Major st., cost \$6,800; R. T. Brown, three att. 2 story and attic bk. dwellings, 18 Oxford st., cost \$6,000; J. A. Kent, 6 Garden ave., pr. s. d. 2 story and attic bk. dwellings, n. side King st., nr. Queen st. (Parkdale), cost \$7,000; Louisa Tolion, 70 Harvard ave., det. 2 story stone and bk. dwelling, e. side Dowling ave., n. of King st., cost \$8,500.

#### FIRES.

The town hall and market buildings at Parkhill, Ont., were totally destroyed by fire on Wednesday last. Loss about \$7,000; insurance \$2,500.-Lawrence Bros, flour mill at Watford, Ont., was burned to the ground on the 27th inst. Loss \$8,000.-A residence on North Front street. Belleville, owned by Mr. Robert Moffatt of Toronto, was burned on Saturday last. The house was insured.-The American Rattan works at the corner of Niagara and Tecumseh streets, Toronto, were damaged by fire on the 26th August to the extent of \$55,000. The loss on the building, which was owned by the Canada Permanent Company, is said to be \$40,000.-The residence of John P. Creer, at Shakespeare. Ont., was totally destroyed by fire on Monday last. Insurance \$500 .- Sinclair's tannery at Shelburne. Ont., was destroyed by fire on Thursday last, Loss \$3,000 . insurance \$1,500.

#### CONTRACTS AWARDED.

EMBRO, ONT.-Messrs. B. F. Young, of Stratford, and A. E. Causey, of St. Mary s, have been awarded the contract for the erection of the new town shall.

WINNIPEG. MAN -The contract for the creetion of Ald. Hallam's new block on Ross street, has been awarded to Messrs. Gray Bros., at the

KNOWLTON, QUE.-The Council have accepted the tender of the Dominion Bridge Company, of Montreal, for three new iron bridges, at the price of \$1,815. It is estimated the masonary will cost about \$2,400.

TORONTO, ONT .- The contract for paving King street from Dufferin street to Roncesvalles avenue has been awarded to Mr. C. H. Clarke. The contract price ir \$20,700.—At a meeting of the Board of Works held on Friday of last week. the following contracts were awarded sewers on Markham and Cunningham streets, Cathro & Co., \$793 and \$448 respectively; cedar block paving on Evans and Montague avenues, W. H. Gibson \$528 and \$548 respectively; cedar block paving, Delaware avenue, from Bloor to College, street. Construction and Paving Company, \$10,007.

MONTREAL, QUE.-Theo. Daoust, architect, has awarded the following contracts. Two tenement houses on St. Denis street, for P. G. Martineau; Stonework, P. Mainvelle & Son; brickwork, Meloche & Bourgeois; roofing, plumbing and plastering, N. Zureal; for six stores for Messrs. Wilson & Frost, at corner

Sherbrooke and St. Lawrence streets; stonework, Wilson & Frost; brickwork, Charpentier & Pepin, iron girders, E. Chanteloup, plastering, H. Constant. For building on St. Charles Berromme street for Mr. Jos. Gauthier, whole contract to Messrs, Wilson & Frost,-P. Lortic & Son, architects, have awarded contracts as follows for the erection of a building at the corner of Wellington and Charron streets, to cost \$11,000, brickwork, G. Leger, roofing, I. Thibenult, plastering, St, Dinis & Dube, painting, Jos. Guy

#### STRENGTH OF STRUCTURAL IRON.

The greatest strength of cast iron is resistance to crushing, hence it is applicable for columns. Its strength as a girder is greater than that of wrought iron, but its comparatively brittle character makes it inapplicable for this purpose, where it would be subject to jarring, as in bridges or girders for buildings. Its most important element, however, is probably its stiffness, in which it is not exceeded by any other material except expensive grades of steel. It is therefore used in machine crames in all possible forms, where its strength may be so great that jars and shocks will have no effect whatever upon it. In general it may be said that cast iron should be used wherever its strength can be made so far in excess of any strain that can be put upon it, that there is no necessity of applying calcula-tion to determine the strength. The only exception to this is its use in columns supporting a perfectly dead load, as in the columns of tall buildings. The columns of a bridge or an elevated railway should be wrought iron or steel. If it is desirable to make structures of this kind stiffer than can be made with wrought iron, it will be found better and cheaper to use stone than iron for the columns, because of the immense mass of material required to absorb the shocks.

Wrought iron is strongest under tension, next strongest as a girder, the weakest under compression. Its extreme between strongest and weakest is not nearly so great as in cast iron, consequently it may be used in any position, but its compression strength and stiffness are so much less than cast iron that it is not used in these forms except for special reasons. It bends, but does not break easily, and it is not affected by any shock that does not bend or batter it. It is, therefore, an excellent material for anything that it is subject to continual vibration, as bridges shafting and boiler plates. Wrought steel is of so many different grades that is almost impossible to keep track of them, but in general it may be said to have the same characteristics as wrought iron, slightly exaggerated, and is therefore valuable in the same kinds of places. Its use is recommended in place of wrought tron when increased strength is required

without increased size.

Cast steel apart from those grades used as cutting tools, has the the same characteristics as cast iron, but is stronger in every way. Its use is especially valuable in the place of cast iron from which it was made, but it does not have the same brittleness. For example, a piece of cast iron bearing a load would be easily broken by a hammer blow that would not affect a similar piece of malleable iron similarly loaded. A blow that would break the loaded piece of malleable iron would not affect the same piece if it were wrought iron, while a load that would bend a piece of wrought iron used as a girder would be easily borne by a cast-iron girder. A cast-iron girder having only a load that would easily be borne by a similar wrought-iron would be broken by a blow that would not affect the wrought iron. Cast steel is not only stronger than cast tron, but it is less susceptible to shock, but a blow that would break a piece of cast steel would not affect or at most batter, a similar piece of wrought iron of

## MUNIGIPAL DEPARTMENT.

#### BRICK SIDEWALKS.

All things considered, bricks for sidewalks are cheaper and more desirable than any other material, for the man who must count the cents before he spends the dollars, and cost is usually the first consideration in the matter of home building.

There are other kinds of sidewalk that are more attractive, easier kept clean, are smoother, or drier; but the item of cost is of paramount importance to the average home maker.

In our larger cities, on business streets it is fitting and proper that property owners put down heavy stone walks, or pavements of cement or granolithic concrete or manufactured stone. But suburban residences do not need such expensive sidewalk material. Usually the masses are well content with a sidewalk of bricks if it is properly constructed.

Right there is the point we would emphasize, "The proper construction of brick sidewalks." An inspection would reveal the fact that in three-fourths of all brick sidewalks put down, the work is illy done. This is why the "Tar and Sand" men are driving their humbug article over us in their attempt to supplant the old standard sidewalk, and we can see now in the suburbs, great stretches of these walks put down as an inducement to would-be purchasers of town lots.

In my daily walks around the towns, both at home and abroad I have studied the sidewalks first, the people afterwards. I find they all do about as their neighbors. If A puts down a board walk, B does likewise. If C lays a brick walk, and does the work himself, D will make the attempt, or set his boys at the job. The work is performed without any attempt at skill or perfection of detail. In these days of light and knowledge, the average citizen thinks he need not be told how to put down brick sidewalk. He will tell you he has seen it done hundreds of times and it is a very simple affair. So he has, usually by some one as ignorant of the matter as he himself.

In the South there are a great many colored men who call themselves bricklayers. They generally secure all the jobs of laying brick sidewalks or repairing same, at an advance of twenty-five cents per day above laborers' wages. These men without having learned a trade, with little skill or practical knowledge of mechanical work, arc entrusted with work that requires care and judgment to insure a good and lasting job.

We frequently find the brick walk full of sunken holes, crushed or rotten bricks, the whole walk is wet, sodden, muddy, and one is inclined to avoid going over it. The bricks are lying in a pool of clay and water, that when stepped on roll around and sink deeper in the mud, or send a shower of muddy water upwards waist high over the person. The writer has had the water squirted in in his face on several occasions from beneath the bricks of such walks. The trouble was, there was no drainage for surface water. The bricks were laid on surface water. The bricks were find on the clay which is no foundation. Every wet spell or heavy shower drove them down deeper, and made bad matters worse. This caused the owner and all others who walked over it to condemn brick sidewalks. The fault was not in the

#### MUNICIPAL ENGINEERS, CONTRACTORS, AND MATERIALS.

bricks, it was in the construction of the walk.

The brick that will wear out, disintegrate under the heels of pedestrians or by the elements of frost and water, should never be put in the sidewalk. The one bad brick in the midst of the hundred good ones condemns the whole lot.

In many places, towns and villages are built on hilly or rolling ground. The grading of streets leaves many of the town lots from one foot to five or more feet above the grade. The surface water from these lots falls down and is scattered. over the sidewalks and is a source of much annoyance, unless precautions are taken to carry this water away or under the sidewalk.

We will suppose your street is brought to proper grade, and curbed. Measure back from the curbing the width of the walk adding six inches, remove the earth, soil or clay eight inches below the top of curb line and make the bottom leaver and solid.

The excavation should now be filled in with five inches of fine crushed rock, coarse gravel, cinders or coal ashes, or any other good hard material that will answer the purpose of drainage. This should be leveled and made solid; on top of this put two inches of sand, spread evenly about the concrete and give it one and a half inches to fall to the curbstone, bringing it to the grade with a templet. The bricks which should be good and hard, well burned, are now laid on the sand foundation, but down to a ime, or straight-edge frequently applied. As fast as the bricks are put in place, scatter clean sharp sand over them, and with an old broom sweep it well into the spaces between bricks, which would be as small as possible. Leave a good coat of sand on the walk until the bricks are firmly bedded, then sweep clean. A row of bricks on end or on edge on the outside of the walk, next to the fence or wall acts as a protection to the walk and assists in keeping surface water from flowing over it .- The Clayworker.

#### A ROAD EXHIBIT AT CHICAGO.

A memorial has been presented to Congress urging that a comprehensive exhibit of roads and their construction and maintenance be made at the World's Fair at Chicago. The author of the memorial, Mr. Albert A. Pope, directs attention to the fact that the classification adopted by the commissioners does not provide for such an exhibit. He refers to the language of the act of Congress providing for the celebration at Chicago, which declares among other things that it is fit that there should be an exhibit of the progress of civilization in the New World, and he insists that the provisions of the act will not be complied with in letter or in spirit if there be no proper exhibit of the civilization of the country as illustrated by its roads, their construction and maintenance.

The substance of the proposition contained in the memorial is that a building be erected to contain an exhibit of examples of road making and maintenance; that publicity be given to the subject throughout the United States and Europe so as to attract the attention of road engineers and builders of road machinery everywhere, and that a large amount of literature on the subject of road making should be distributed gratuitously to those who may visit the department. It is suggested that exhibits of sections of the best road construction throughout the world should be shown; particularly that there should be exhibited sections illustrating the best and cheapest methods of constructing the common country roads in the various states; that competent road engineers and geologists should be employed in arranging this exhibit, and that expert chemists who have made a study of constructing artificial stone and cement should be engaged in the work, the great object in view being the education of the people how to use to the best advantage. under the existing circumstances and environments, whatever money may be spent in the construction of good highways. This exhibit, the memorial says, will not be for this nation alone, but for all the nations of the earth whose representatives may be gathered at the World's

## THOROLD CEMENT

WELLAND CANAL ENLARGEMENT, RESIDENT ENGINEER'S OFFICE. WELLAND, April 17th, 1884.

JOHN BATTLE, Esq., Thorold:

JOHN BATTLE, ESQ., Thorold:

Dear Sir.—Yours of yesterday, relative to Thorold Hydraulic Cement, is received. In reply, I kig to say that my tests of the Thorold Hydraulic Cement have extended over a period of twenty-eight years, and have been on a large scale, as exemplified in the locks, bridges, culverts and other masonry on the Welland Canal and Welland Railway, and that the record, which has been invariably satisfactory, is to be found in examination of the structures. The necessary tearing down of masonry and concrete, during the Welland Canal Enlargement, has afforded abundant evidence of the reliability of the Thorold Hydraulic Cement, both in masonry and concrete, and above and under water. I desire no better cement for the class of work referred to. no better coment for the class of work referred to.

I am, dear sr., yours truly, W. G. THOMPSON, Resident Engineer.

### DEBENTURES WANTED.

Municipalities usuing debentures, no matter for what purpose, will find a ready purchaser by applying to G. A STIMSON, 9 Toronto Street, Toronto N.B .- Money to loan at lowest rates on first mortgage.

# ASPHALT PAVING

We are prepared to do first-class work on WALKS, FLOORS, CELLAR BOITOMS, &c., with ROCK ASPHALI, which is conceded to be the best for this class of work.

## H. WILLIAMS & CO.,

Roofers and Pariors,

4 Adelaide Street East, - TORONTO.



PIPES,
Double Strength for railway culverts, etc.
Sencer Bottoms or Invert Blocks, Cement,
Norz-Only pure SCOTCH unglared Fire Clay
Linungs will be kept in stock; any other quality is
worthled for resisting heat. Correspondence invited.
Quotations promptly furnished.

Office: 31 Wellington St., Montreal

ISAAC USHER & SON. THOROLD, ONT.

Manufacturers of

# **QUEENSTON CEMENT**

Proved by Government tests to be the best Canadian natural cement. Write for prices, &c.

R. E. H. BUGKNER,

32 Adelaide St. East, -TORONTO.

PATENT CAST IRON GULLIES.

Vitrified Clay Sewers - Dust Bins - Sewer Pipe Cements Steam Road Rollers Stone Breakers Street Scrapers Horse Brushes, etc.

HAMILTON and TORONTO SEWER PIPE CO.

- KOR -

SEWERS, CULVERTS.

WATER PIPES. INVERTS

AND

**Fire Brick Sewers** 

Write for Discounts.

HEAD OFFICE AND FACTORY, HAMILTON, CANADA.

# Drummond McCall Pipe Foundry Company,

# WATER AND CAS PIPES

VORKS · LACHINE, QUE.

PRICES ON APPLICATION.

A. & E. LOIGNON,CIVIL ENGINEERS.

Bridge and Structural Iron Work.

Plans, Estimates and Specifications.

WORKS. ST. COLUMBAN SI. AND CANAL SIDE, MONTREAL.

OFFICE: 7 PLACE D'ARMES, Telephone 2277.

FOR CELLARS, FLOORS, STABLES, ETG.

A. GARDNER & CO.,

ROOM D, YONGE STREET ARCADE, TORONTO.

OF ST. JOHNS, P, Q., (LIM.)



Manufacturers of

Salt-Glazed. Vitrified

# SEWER

Double Strength Railway Culvert Pipes, Inverts, Vents,

Architectural Itonwork a Specialty.

Pleased to furnish estimates.

## THE J. C. EDWARDS

Vitrified Terra Metallic Paying Brick

- FOR

STABLE, COACH HOUSE, BOILER HOUSE, BREWERY FLOORS AND YARDS, Also all places of heavy and light traffic.

The only Genuine Vitrified Brick. The best in the Sidewalks & Street Grossings FROST-PROOF, WATER-PROOF, TIME-PROOF

GUTHERTSON, AGENT FOR CANADA.

Room 64, Tem.

PRICES ON APPLICATION.

Room 64, Temple Building, Montreal.

Toronto. Montreal. 25 00 20 50

# THE CENTRAL BRIDGE WORKS

Peterborough, Ont.

WM. H. LAW, Proprietor and Engineer.

#### MANUFACTURER OF

## RAILWAY AND HIGHWAY BRIDGES

Viaducts, Piers, Roofs, Turntables and Girders in Steel and Iron.

Tension members forged without welds. Riveting done by hydraulic or compressed a r machines. Specialties: Good workmanship and strict adherence to specifications and drawings.

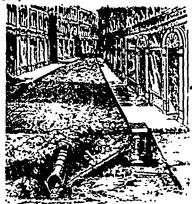
CAPACITY: 2,000 TONS PER ANNUM.

Municipal officers, contractors and others are requested to mention the CONTRACT RECORD in correspondence with advertisers.

St. George's Patent Sectional

## CAST IRON STREET GULLEY.

Over 5000 Gulleys are now in use in the following towns: Montreal, Toronto, Ottaws, Quebec, St. Cunesconde. St. Henri, Peterboro, Owen Sound, Sarnis, Cote St. Antoine, Sherbrooke, London, New Glasgow, N.S. A saving of \$72 on each gulley over the brick A saving of \$22 on each gulley over the brick



# EWIS SKAIFE,

New York Life Building, - MONTREAL. AGENT.

## Prices of Building Materials.

LUMBER.

Toronto. Montreal.

	S	\$	\$	\$
14 to 2 clear picks, Am. in	s30 00@	332 OO	40 000	
1 to a three uppers, Am 1		37 00	49 00	45 00
th to 2, pickings, Amins.		27 00	27 00	30 00
3 inch clear.			53 50	လလ်
x ro and re dressing a				
better	18 ∞	30 00	18 ∞	20 00
a x to and ta till time		14 00		19 ∞
x x 10 and 12 dressing		16 00,		1800
z x to and 12 common		13 00	8∞	10 00
1 x 10 and 12 spruce culls		11 00	1000	11.00
a x 10 and 12 maple culls.	•••	900		900
z inch clear and picks	25 00	30 00	33 00	35 ∞
t inch dressing and better	18 00	20 00	18 00	20 00
t inch siding, mill run		16 00	14 00	16 ∞
z inch ziding, common z inch ziding, zhip culls		12 00	13 00	14 00
r inch siding, mill culls	,000	9∞	800	11 00
Cull scantling	8	9∞	800	900
and thicker cutting	o w	yw	• •	9∞
plank		25 00	22.00	25 00
g inch strips, 4 in. to 8 in. n	oill	.,	00	
100		15 00	14 00	1500
z inch strips, common	11 00	12 00	11 00	1200
winch flooring	14 00	15 00	14 00	15 00
winch flooring		26 00	14 00	1600
XXX shingles, sawn, per			•	
76 in		2 35	2 30	2 35
XX shingles, sawn	1 30	1 35	1 30	
			_	
TARD Q	UOTATIO	NS.		
Mill cull boards and scantl	ng	10 00		1000
Shipping cull boards, p	10.			
miscnous widths	• • •	13 00		1300
Shipping cull boards, sto	cks	16 00		26 ∞
Hemlock scantling and Jo	ist			•
ap to 16 ft	11 00	13 00		1000
Hemlock scantling and jo	ist			
up to 18 ft	1200	13 00	12 ∞	13 ∞
Hemlock scantling and jo	ist			
DE 10 20 H	13∞	14 00	13 ∞	1400
Scantling and joist, up to a		14 00		14 00
	នប័	15 00		15 ∞
	οĝ	10 ∞		1600
	n fi	17 ∞		17 00
	4 tr	19 00		29 OO
	ğΩ	22 00		81 CO
	E ft	43 00		2100

	11	**	34 Ñ	,	29 50 31 00		29 50 31 00
Cutting t		40 to	186		31 00 33 00 31 00		33 co
thicker	dry plank	•• • ×	and	5 00	26 oo	a5 00	26 00
thicker, Cutting thicker, Cedar for	board.	y 171 nving.	and t	8 00	88 00	18 00	11 00
cord Cedar fo	r Kerbin	E. 4 ×	1 14.		5 00		5 00
Der M.					14 00		14 00
i K in flo	oring, dre	ssed, I	M., 3 M.,	8 00 8 00	31 00 22 00	18 00 28 00	31 00 82 00
156 Inch II	dre	ssed, i ssed, i	M. 14 6	7 00	30 00 19 CO	27 00 18 00	30 00 19 00
, Q	• undre	ssed	1	* on	22 Q <sup>Q</sup>	13 0Ó 12 00	22 (0) 15 (0)
Readed at Clapbourd XXX say	heeting, d	ressed	2	2 00	35 00 12 00	22 00	35 00 12 00
18 in Sawnlath				305	# 75 # #)	2 00	3 co
Cedar	••••	• • • • • •	••••		200	30 00	# 90 40 00
White Basswood Cherry, N White ash Black ash	No. 1 a	ad a	3	5 00 8 00	45 00	35-00 18 00	45 00 90 00
White ash	o rand No ra	a	7	500	70 00 25 00 30 00	70 00 30 00	80 co 35 co 30 co
Dressing a Picks, An	tocks	na s.,	1	5 00 5 00	30 00 82 00 40 00	18 00 16 00	33 00
Three upp	xrs, Am.	intbec	nout		50 00		40 00 50 00
Common Cond Fac	11/411:	BRI					6 00 8 50
Good Faci Sewer		••••	••••	8 50	9 (0	8 50	900
Presse Plain bric	d Brio k, f. o. b.	at Mi	lton	•	18 00		
	and qu	ality.			14 00		
Hard Buil	iding ind Örn <b>ar</b>	nenta!	per		8 00		
Roof Tile Diamond	s Iocking ti	10	••••	300	10 00 74 00 10 00		
					18 ∞		** **
bellville and qualit ard	y, f.o.b		••••		14 00		25 00 20 00 17 00
Tiles	ai, per 10		••••		10 00	3 00	10 00
Plain brick	k, "A" (o	b,Don	Valle	2.	18 00 16 00		25 00 22 00
Trojan or	Buff				13 00		1800
Trojan or Ornament	al, per to	× Sz	(ND		60 00	3 ∞	30 00 60 00
Per Load	ሚ ፣ አች ር/	ibic Yı	ON I		1 25		1 75
Common l	Rubble,	ner to	ise.		14 00		14 00
delivere Large flat delivere	Rubble,	per to	ive,		18 00		18 00
delivere Foundation Kent Fre Moncton	eestone	Quarr	€. 18\$,		50		50
ft., f o.b	n, N. ss.	, per	cu.		1 0)		
River Jo	hn, N.S	. bro	o.b.	8o	95	6.	
River Jo Freeston Ballochmy	hn, N.S ne, per Cu rle	i, bro	o.b.	80		65	75 1 05
River Jo Freeston Ballochmy New York Granite (S	hn, N.S ne, per cu le Blue St tanstead)	one	o.b.	80	95	65	75 1 05 25 80
River Jo Freestor Ballochmy New York Granite (S in. 10 22 Mowat Fr Credit V: toise, de	hn, N. S ne, per cu yle	one Ashla 10., pe	r, 6		95		1 05
River Jo Freestor Ballochmy New York Granite (S in. 10 22 Mowat Fr Credit V: toise, de	hn, N. S ne, per cu yle	one Ashla 10., pe	r, 6		95 90		1 05
River Jo Freestor Ballochmy New York Granite (S in. 10 22 Mowat Fr Credit V: toise, de	hn, N. S ne, per cu yle	one Ashla 10., pe	r, 6	3∞	95 90 14 00		25 25 80
River Jo Freestor Ballochmy New York Granite (S in. 10 22 Mowat Fr Credit V: toise, de	hn, N. S ne, per cu yle	one Ashla 10., pe	r, 6	3∞	95 90 14 00 3 00		25 80 290
River Jo Freestor Ballochmy New York Granite (S in. 10 52 Mowat Fr Credit Va ing, per Credit Va sion, per Credit Va sion, per Credit Va son, per Credit Va son, per Credit Va son, per	hn, N. S. ne, per cu , Blue St. ttanstead) in, rise 9 reestone. alley Bro superficial superficial lley Brow r cubic il lley Gre r cubic i	one	per :	3 00 2 50 2 52	95 90 14 00 3 00 90	70	2 90 90 2 15 80
River Jo Freestor Ballochmy New York Granite (S in. 10 52 Mowat Fr Credit Va ing, per Credit Va sion, per Credit Va sion, per Credit Va son, per Credit Va son, per Credit Va son, per	hn, N. S. ne, per cu , Blue St. ttanstead) in, rise 9 reestone. alley Bro superficial superficial lley Brow r cubic il lley Gre r cubic i	one	per :	3 00 2 50 2 52	95 90 14 00 3 00 90 2 00 75 14 50		2 90 90 2 15 80
River Jo Freestor Ballochmy New York Granite (S in. 10 52 Mowat Fr Credit Va ing, per Credit Va sion, per Credit Va sion, per Credit Va son, per Credit Va son, per Credit Va son, per	hn, N. S. ne, per cu , Blue St. ttanstead) in, rise 9 reestone. alley Bro superficial superficial lley Brow r cubic il lley Gre r cubic i	one	per :	3 00 2 50 2 52	95 90 14 00 3 00 90 2 00 75 14 50 32	70	2 90 90 2 15 80
River Jo Freeston Ballochmy New York Granite (S in. 10 32 Mowat F Credit V toise, de Credit Va sion, pe Credit Va on, pe Credit Va con, pe Cred	hin, N. S. hin, N. S. hin, N. S. hiller St. liler St. liler St. liler St. liler St. liler St. liler Brow superfici. liler Brow superfici. liler Grey erficial y liler Grey erficial st. liler Grey erf	one	per : i	3 00 2 50 2 52	95 90 14 00 3 00 90 2 00 75 14 50 32 60	70	2 90 90 2 15 80
River Jo Freeston Ballochmy New York Granite (S in. 10 12 Mowat F Credit V toise, de Credit V sion, pe Sion, pe Credit V sion, pe Sion, pe Credit V sion, pe Sion, pe Sion, pe Credit V sion, pe	hin, N. Sie of the light of the	ble, for Ashla in., pe bble, and Coursi ard oot. Vered, vered, oot. I bb. ion. uous. ion.	o.b. r, 6 rft, per il. ich. per cft, cft, cft, cft, cft, cft, cft, cft,	3 00 2 50 2 52	95 90 14 00 3 00 90 2 00 75 14 50 32	70	2 90 90 2 15 80
River Jo Freeston Rallochmy New York Granite (S. in. 10.33 Mowat F. Credit V. toise, de Credit Va sion, p. C	hn, N. Shen, N. Shen, N. Shen, N. Shen, N. Shen,	one	o.b.  r. 6 rft,  per  con- icon- ico	3 00 2 50 2 52	95 90 3 00 90 2 00 75 14 50 32 60 65 80 85	70	2 90 90 2 15 80
River Jo Freeston Rallochmy New York Granite (S. in. 10.33 Mowat F. Credit V. toise, de Credit Va sion, p. C	hn, N. Shen, N. Shen, N. Shen, N. Shen, N. Shen,	one	o.b.  r. 6 rft,  per  con- icon- ico	3 00 2 50 2 52	95 90 14 00 3 00 90 2 00 75 14 50 65 85	70	2 90 90 2 15 80
River Jo Freeston Rallochmy New York Granite (S. in. 10.33 Mowat F. Credit V. toise, de Credit Va sion, p. C	hn, N. Shen, N. Shen, N. Shen, N. Shen, N. Shen,	one	o.b.  r. 6 rft,  per  con- icon- ico	3 00 2 50 2 52	95 90 14 00 3 00 90 2 00 75 14 50 37 60 65 80 85 81 11 11 12 12 14 17 14	14 00	2 90 90 2 15 80
River Jo Freeston Ballochmy New York Granite (S. in. 10.72 Mowat Freeston Wowat Freeston Wowat Freeston Wowat Freeston Wowat Freeston Wowat Freeston Wowat Wosson, pe Madoc Ru toise Madoc Mu	hn, N. S. hn, N. S. hn, N. S. hn, Per cu els liue St tanstead) in, rise 9 rectione. alley Brow superficial y ulley Brow re cubic el ley Grey erficial y ulley Grey er cubic el bbNe, dell monto, pe sstone, N. housis, fo, e d duty bs d flagging  "" be adde	one Ashla in., pe bble, wm Coolin yarron oot Coursi yarron oot Coursi in r cubicoot ion ion ion ion ion ion ion ion ion id. io	o.b. r. 66. r. r. ft. r. r. ft. r. ft	3 00 2 50 2 52	95 90 14 00 3 00 90 2 00 75 14 50 65 80 85 81 11 11 11 16 16	14 00	2 90 90 2 15 80
River Jo Freeston Rallochmy New York Granite (S. in. 10.32 Mowat F. Credit V. toise, de Credit V. sion, p.	hn, N. S. k Blue St tanstead) in, rise g rectione. alley Ru ilivered illey Brox superficial in the super	one	ob	3 00 2 50 2 52	95 90 14 00 3 00 90 2 00 75 14 50 37 60 65 80 85 81 11 11 12 12 14 17 14	14 00	2 90 90 2 15 80
River Jo Freeston Ballochmy New York Granite (S. in. 10.73 Mowat Freedit Vt. toise, de Credit Va. sion, procedit Va. sion, po. Madoc Ru. Madoc Ru. Madoc Ru. Madoc Ru. Too Ohio Free Promise No. 1 Blut No. 1 Blut The ab freight ana. 2 in. sawe 23 " " " " " " " " " " " " " " " " " "	hn, N. S. hn, N. S. hn, N. S. hn, P. C. hn, P.	one  If , f	ob	3 00 2 50 2 52	95 90 14 00 3 00 90 2 00 75 14 50 37 60 65 80 85 81 11 11 12 12 14 17 14	14 00	2 90 90 2 15 80
River Jo Freeston Ballochmy New York Granite (S. in. 10.72 Mowat F. Credit Vatoise, de Cr	hn, N.S. hn, N.S. hn, N.S. hn, N.S. hne, per cu cle live lie l	one. It is, it i	ob	33 00 2 50 2 50 2 50 4 00 40 40 40 40 40 40 40 40 40 40 40	95 90 3 00 90 2 00 75 14 50 85 85 85 81 1134 123 2734 133 133 134 135 135 135 135 135 135 135 135 135 135	14 00	2 90 90 2 15 80
River Jo Freeston Fre	hn, N.S. hn, N.S. hn, N.S. hn, N.S. hne, per cu cle live lie l	one	ob.  ob.  rft.  per t.  per t.  cen.  i.  cen.	3 00 2 50 2 50 1 53 4 00 4 00	95 90 14 00 90 2 00 75 14 50 85 85 85 81 11 32 27 73 31	14 00	2 90 90 2 15 80
River Jo Freeston Ballochmy New York Granite (S. in. 10 32 Mowat Freeston Wowat Freeston Howat State of Credit Value of Credit	hn, N. S. calley St. tanstead) in, rise greetione. alley Ru ilivered. iliver	blic,  Ashla to, per blic, or	ob.	3 00 2 50 2 50 3 53 4 00 4 00	95 90 14 00 3 00 75 14 50 85 85 85 11 13 24 33 33 15 50 50 00 70	14 00	25 80 290 90 90 215 80 1450
River Jo Freeston Ballochmy New York Granite Granite Go in. 10 32 Mowat Freedit Vatoise, de Credit Vatoise, per superference de Credit Vatoise, de Credit Vatoise, per superference de Credit Vatoise, per superference de Credit Vatoise, per superference de Credit Vatoise, de Credit Vatoise, per superference de Credit Vatois de Cre	hn, N. S. hn, N. S. hn, N. S. hn, N. S. hn, Pr cu cle Blue St tanstead) in, rise g rectione. alley Ru ilivered illey Brow superficial in the superfi	blie,	ob	3 00 2 50 2 50 3 53 4 00 4 00	95 90 14 00 3 00 90 75 14 50 65 85 85 11 13 2 2 3 7 3 3 3 1 5 5 0 00 70 15 00 90 90	14 00	105 25 80 290 90 215 80 1450
River Jo Freeston Fre	hn, N. S. hn, Process Blue St tanstead) in, rise g rectione. alley Ru ilivered. ilivered or superficial illey Brow superficial in control in	one. At , f. d.	ob	3 00 2 50 2 50 4 00 80 80 80 80 80 80 80 80 80 80 80 80	95 90 3 00 90 2 00 75 14 50 65 85 85 81 11 13 14 14 14 14 14 14 14 14 14 14 14 14 14	14 00	105 25 80 290 90 215 80 14 50
River Jo Freeston Ballochmy New York Granite (S. in. 10.73 Mowat F. Credit Vatoise, de Cr	hn, N.S. hn, N.S. hn, N.S. hn, N.S. hne, per cu lege	one	ob	3 00 2 50 2 50 4 00 80 80 80 80 80 80 80 80 80 80 80 80	95 90 14 00 90 90 75 14 50 65 85 85 81 11 13 14 14 17 17 17 17 17 17 17 17 17 17 17 17 17	14 00	105 25 20 20 215 80 14 50 16 00 8 00
River Jo Freeston Fre	hn, N. S. hn, N. S. hn, N. S. hn, N. S. hn, Pr cu cle Blue St tanstead) in, rise g rectione. alley Ru ilivered illey Brow superficial illey Brow superficial illey Brow superficial illey Grey erficial pulley Grey erficial pulley Grey r cubic i ley Grey erficial incasion i ronto, pe stone, N uous, f.o. e Dimens of Dimens of Dimens of daty pa d flagging  "" be adde for buill er c.ft. fo viving bloc	one. At , f. d.	ob	3 00 2 50 2 50 2 50 4 00 40 40 33 35 55.	95 90 14 00 3 00 90 2 00 75 14 50 85 85 81 11 13 20 15 00 90 90 90 90 90 90 90 90 90	70	105 25 20 20 20 215 80 14 50 16 00 8 00 7 59
River Jo Freeston Ballochmy New York Granite (S. in. 10 32 Mowat F. toise, de Credit Vatoise, de Credit Vato	hn, N.S. hn, N.S. hn, N.S. hn, N.S. hn, N.S. hn, N.S. hn, P. Cub. le Statustically in, rise 9 rectione. alley Brow superficial y ulley Brow re cubic i bley Brow re cubic i bley Grey erficial y ulley Grey erficial y bley Grey erficial y synary p unitad black S  synary p can, p	on breef, for the control of the con	ob. , 6	3 00 2 50 2 50 4 00 to	95 90 14 00 3 00 90 2 00 75 14 50 85 85 81 11 13 20 12 30 13 31 14 50 15 32 17 33 17 50 18 60 18	14 00	105 25 20 20 20 215 80 14 50 16 00 8 00 7 50
River Jo Freeston River Jo Freeston Rallochmy New York Granite (S In. 10 33 Mowat F Credit Va toise, de Credit Va sion, po Radoc Ru Madoc Ru Madoc Ru No. 1 Blu S J J J J J J J J J J J J J J J J J J	hn, N. S. hn, Process control of the service of the serv	one. At , f. d.	ob.	3 00 2 50 2 50 2 50 4 00 33 35 50 50 50 50 50 50 50 50 50	95 90 95 90	70 1400	25 25 20 29 90 90 215 80 14 50 16 00 7 7 50 6 25 8 8 9 6 7 7 50 17
River Jo Freeston Ballochmy New York Granite (S. in. 10 32 Mowat F. Credit Vatoise, de Cr	hn, N.S. hn, N.S. hn, N.S. hn, N.S. hn, N.S. hn, Per cu le	one. It is the series of the s	ob.  6 r. 7 r.	3 00 2 50 2 50 2 50 4 00 70 70 70 70 70 70 70 70 70 70 70 70	95 90 95 90	6 00 7 50 2 60 90	105 25 & 25 20 20 215 & 25 214 52 16 00 8 00 7 50
River Jo Freeston Ballochmy New York Granite Co. Mowat Freeston Ballochmy New York Granite Co. Mowat Freeston Washen Credit Va. Sion, p. Toronisc No. 1 Biol. No.	hn, N. S. hn, S. Halley St. Halley St. Halley Ru Hilvered. Hey Brow superficial y Hey Brow superficial y Hey Brow superficial y Hey Brow superficial	one. It is the series of the s	ob	3 00 2 50 2 50 2 50 2 50 2 50 2 50 2 50	95 90 90 14 00 3 00 90 90 90 80 85 113 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	700 t400	25 25 20 29 90 90 215 80 14 50 16 00 7 7 50 6 25 8 8 9 6 7 7 50 17

Toronto. Montreal.	Toronto. Montreal.
Black, lamp	3d to 5d cold cut, not polished
	or blued, per 100 lbs 90 90
Oil, linseed, raw, & Imp. gal. 65 68 63 65 68 68 68	FINE BLUED HAILS.
1, 00 /1 00	3d, per 1co lbs 1 50 1 50
Punty refined, " 78 85 75 75	ag' ,, ,, 3 00 3 00
Whiting, dry, per 100 lbs 73 1 00 60 73	CASING AND BOX, PI CORING, \$1100K AND TOBACCO BOX
Paris white, Eng., dry on 1 as go 1 to	NA11.5
Litharge, Am	12d to 30d, per 100 lbs 50 50
Sienna, burnt	300, 00 60
Umber, " 836 to 12 15	8d and 9d, " " 75 75 6d and 7d, " " 90 90
OEMENT, LIME, etc.	4d to sd. " " 110 tio
Cement, Portland, per bbl. 260 251	3d, " " 150 157
" Thorold, " 150	PINISHING NAILS.
" Queenston, " 150	3 inch, per toolbs 85 85
ii Napanoe, ii . 1 to	13/ 10 21/1 " " 100 too
n Hull, n ., 150	2103% " " " 11" 115
ii Ontario ii 1 10	134 to 134 " " " 1 35 1 35
# German # 265 285	136 " " " 1.75 1.76
11 10 1001	t """ 225 725
# Rengian # 235 250	SLATING HAILS.
" Caradian " 225 230	sd. per 100 lbs
H KOMAN " 275	40,
Parian " 450 475	3d, " '" 125 125 2d, " " 175 175
" Superfine " 650 700	COMMON BARREL NAILS.
Keene's Coarse "Whites" 450 475	t inch, per 100 lbs 1 50 t 50
Calcined plaster, per barrel 2 55 1 70	76 " " " ······ 175 75
Fire Bricks, Newcastle, per M 20.0 24.00	75 " " " 175 75 75 " " " 225 225
Scotch 30 00 35 00 Lime, Per Barrel, Grey 40	CLINCH NAILS.
White 55	3 inch, per 10 1 bs. 85 85
Plaster, Calcined, N. B 2 00	21/2 and 21/1 11 11 11 100 too
" " N. S 200	2 and 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Hair, Plasterers', per bag 80 1 co	11/2 and 11/2 " " " 135 135
HARDWARE.	134 11 11 2 00 2 00
Cut nails, 5 d & 6 d, per keg 2 40 2 25	1 120 120
Steel 11 11 11 2 50 2 35	SHARP AND PLAT PRESSED HAILS.
CUT HAILS, PENCE AND CUT SPIKES.	3 inch, per 100 lbs. 2 35 2 35
40d, hot cut, per to lbs 5 5	25 and 25 " " 1 250 130 2 and 25 " " 1 25 t 65
30d, 11 11 11 11 10	1½ and 1¼ " " 185 185
20d, 16d and 12d, hot cut, per	134 " " " 250 250
100 lbs	1" " " 300 300
	Structural Iron :
8d, od, 11 11 11 25 25 25 6d, 7d, 11 11 11 40 40	
4d to 5d," " " 60 60	" channels, " 285 360
3d, """ 1 co 1 co	"angles, " 250 350
ad, """",, 150 150	;; tees, ;; 760 105
4d to 5d cold cut, not polished	piates, 255 335
or blued, per 110 lbs 50 50	Sheared steel bridge plate 2 25 2 35
INDEX TO ADV	VERTISEMENTS

tect and Bullder." Plastering Fibre
Nowell & Co., R. L... x
Plumbing Supplies
Booth & Sun... v
Garth & Co... xii
Malcolm, W. B... iv
Sanitas Mfg. Co. vii
Mosling Blaterials
McArthur & Co., Alex x
Merchant & Co. ix
Metallic Roofing Co x
Samuel, Benjamin &
Co... Roofers
Until & Sons. G. 11
Forbes, Duncan... 11
Forbes, Duncan... 11
Forbes, Manager Co. vii
Hutson, W. D... 11
Reggin, J. ... 11
Reggin, J. ... 11
Reggin, J. ... 11

INDE	X TO	ΑDΙ	Ι.
In	the "Cana	dlan Ar	cł
Architects.	Cemen	14.	=
Ontario Directory 111	4 1	C	
Quebec Directory vi Architectural Sculp	Adamson, Jos. Bremner, Alex Currie&Co, W. Estate of John riyde & Co., F. McNally & Co. Maguire, Wm. McRee & Co. Morris, E. D.	ix	į
Architectural Sculp tors and Carvers. (amovsky, B. H. 1V	Estate of John	Battle A	1
Carnovsky, B. H. IV Hicks, W. risens II Holbrook & Molling	nyde & Ca., F	xiv	1
ton	Maguire, Wm.	iv	C
Turner, Frederic II Wagner, Zeidler & Co ii	Morris, E. D.	iv	j
Architectural Iron-	Morrison & Co. Rathbun Co. Strathy & Co. I Usher & Son, I Wright & Sons	, T. A. x viii	7
B. Greening Wire Co iv	Strathy & Co. I Usher & Son. I	R.L.F. viii saac. ix	,
Dennis R x Ives & Co., H. R IV	Wright & Sons,	C. B. xiv	į
Dennis, R Ives & Co., H. R IV Dominion Bridge Co. 1 Whitfield, John II	Contractor Builde	rs.	,
Art Woodwork.	Davidson & Ke	lly. II Fvi	1
Carnovsky, B. H 1V Wagner, Zeidler & Co vii	Dick, James, & Hood & Co., C Hancock, Thos		٠
Wagner, Zeidler & Co vii Alabastine The Alabastine Co.,	Murison & Bur	ge. vi	į
Paris, Limited ×	Hancock, Thos Murison & Burg Roberts, Wm Turner & Co.,	G. W xi	
Bellhanger. Richardson, I. TIII	Contractors	' Plant	1
Bricks (Pressed).	Copland & Co.	!!	
Brick Co vii	Cut Stone		1
Brick Works ix	teactor		1
Beamsville Pressed Brick Co	Adamson, Jos. Curtis & Rowe Isaac Bros Oakley & Holm		1
Morris, E. D iv	Oakley & Holm	es II	•
& Sewer Pape Co ix Morris, E. D	Chimney To Bremner, Alex. Currie&Co., W.	opping.	
& Ferra Cotta Co iii The Ont. Terra Cotta Brick & Sewer Pipe Co vii			3
Brick & Sewer Pipe Co VII	Drain 1 Adamson, Jos. Bremner, Alex Gurrie & Co., W Hamilton and T Sewer Pipe C McNally & Cr. Maguire, Wm. McRae & Co Milton Pressed & Sewer Pipe The Ont. Te ra & Pressed Br The Colman	?ipe	I
Builders' Supplies. Adamant Mfg Coviii Adamson, Joseph I	Bremner, Alex	&F.P. viv	3
Adamson, Joseph. 1 Bremner, Alex ix Copland & Co 11 Currie & Co W. & F. P. xiv Hlyde & Co., F xiv Maguire, Wm iv Morriso, E. D. ix McNally & Co IV Morrison & Co., T. A. III Rathbun Co viii Rowe, Geo II	Hamilton and T	oronto	
Currie & Co W. & F. P. xiv	McNally & Co.	,w. iv	7
Hyde & Co., F xiv Maguire, Wm iv	McRae & Co	ii iii	7
Morris, E. D ix	Milton Pressed & Sewer Pipe	l Brick : Co ix	
Morrison & Co., T. A.III	The Ont. Te ra	Cotta.	1
Rowe, Geo II Strathy&Co., R. L. F. viii	The Colman	Hamil-	Ň
Strathy&Co., R. L.F. viii	ton Co Wright & Sons	C. B. xiv	7
Boller Corering. Can. Mineral Wool Co ii	Dumb We King & Son, W	a <i>llera</i> Varden xiv	c
Building Stone Dealers.	- Electria Li	aktina	
Adamson. Jos I Morrison & Co., T. A.III Samuel & Sons, Thos. x	Elevato	TS.	7
Samuel & Sons, Thos. x	Ives & Co., H. Leitch & Turnb	RIV	1
Blue Print Paper Sharpley & Sons, R ix	Engrav Can. Photo-En	ers.	
Builders' Hard- wure,	reau	ii	(
Rice Lewis & Son IV Samuel, Benjamin & Co., M. & L vii	Fire Brick a	nd Clay	Ĭ
Ca, M. & L vii	Bremner, Alex.	······ ix	•
Thunch and School	Curries Co. W	&FP xiv	1
Firmiture. Can. Office & School Furniture Co ii Globe Furniture Co IV Office Specialty Co III	Adamson, Jos. Bremner, Alex. Colman-Hamilt Currick Co. W Hyde & Co., F McNally & Co. Morris, P. D. Wright & Sois	. w iv	2
Globe Furniture Co IV	Wright & Sons	C. B.xiv	
Office Specialty Co III	Grains and	Tilos.	1

Orcosote Stains Cabot, Samuel..... i

TO ADV	ERTISEM
e "Canadlan Arc	chitect and Builder
Cements.	Galvanized Iron
lamant Mfg Co. viii lamson, Jos I remner, Alex. ix rrie&Co, W.&F.P. xiv trie&Co, W.&F.P. xiv tate of John Battle a yde & Co., F xiv laguine. Wm iv race. Wm iv rris&E.D iv orrison & Co., T.A. x thbun Co viii rathy & Co. R.L.F. viii her & Som, Isaac. ix right & Sons, C. B. xiv	Works. Douglas & Plunkett. 11
emner, Alex. ix	Douglas & Plunkett. II Hedges & Lankin II Tucker & Dillon II
rrie&Co, W.&F. P. xiv	
de & Ca. Fxiv	Heating. Burroughes & Co. W.J xi
Nally & Co., Wm. IV	Clare Bros x
aguire, Wm iv	Gurney & Co, E & C. ix
ortis, E. D. iv	Garth & Co xii
orrison & Co., T. A. x	King & Son, Wardenxvi
thbun Ca viii	Manny & Co., E. A vii
her & Son. Isaac. ix	McClary Mig. Co.,xiii
right & Sons, C. Bxiv	Burroughes & Co. W. J. xi. Clare Bloss
Contractors and	
Builders, widson & Kelly. 11	Cox i;
ck, James, sr vi	Iron Fences. Ives & Ca., H. R IV
od & Co., C !!	
incock, Thos II	Ives & Co. H. R IV
berts, Wm 11	Iron Pipe. Ives & Co., H. R IV King & Son, Wardenx.v
Nusion & Keily 11 ck, James, sr. vi sod & Co., C. 11 nucock, Thos. 11 urison & Burge vi oberts, Wm. 11 rrer & Co., G. W. xi	Laundry Tubs
ontractors, riant	Laundry Tubs Forsyth, Robtxin Rice Lews & SonIV
and Machinery pland & Co !!	Time and Stone
we, Geo 11	Currie & Co. W & F P.xiv
Cut Stone Con-	Hyde & Co., Fxiv
	Morris, E. D iv
rtis & Rowe II	Lime and Stone. Curie & Co, W & F P.xiv Hyde & Co. F iv Wright & Sons, C. B.xiv Legal. Denton. Dods & Den-
ac Bros 11	
kley & Holmes II	ton III
umney Topping.	Mantels and Over- mantels.
himney Topping. emner, Alex ix rrie&Co.,W. &F.P.xiv	Millichamp Mfg. Co iv
Deniu Pina	Metallio Lath.
amson, Jos 1	B. Greening Wire Co. IV Metallic Roofing Co vi
amson, Jos ix emner, Alex ix rrie & Co., W&F.P.xiv	
milton and Toronto	Mortar Colors and Shingle Stains. Maguire, Wm iv Murhead, Andrew i
ewer Pipe Co ix	Maguire, Wm iv
guire, Wm v	Muirhead, Andrew i
Rae & Co	Toronto Pressed Brick
Sewer Pipe Co iv	Ornamental Plas.
e Ont. Te ra Cotta.	terers.
Pressed Brick Co. vii	Baker, J. DIII Wright, JasIII
on Coiii	Paints & Varnishes.
milton and Toronto Sewer Pipe Co ix Nally & Co., W. 1V guire, Wm v Rae & Co. 111 Iton Pressed Brick 8 Sewer Pipe Co ix e Ont. Te ra Cotta. VPressed Brick Co. vii e Colman Hamilo on Co iii right & Sons, C. B	Muirhead, Andrew i
Dumb Walters	Painters.
ng & Son, Warden xiv	
Sk Co., H. R IV  titch & Tumbull I	Paving. McAnhur & Co., Alex x
Elevators	McArthur & Co., Alex x The Guelich Silica Barytic Stone Co
itch & Tumbull I	Barytic Stone CoIII
Engravers.	Forsyth, Robertvii
Engravers.  Bhoto-Eng Bu-	Pipe Covering Can. Mineral Wool Co. ii
tau ii	Plasterers
amson, Jos 1	Plasterers Hynes, W. J I Watson Bros II
mner, Alex ix	Watson Bros 11
man-Hamilton Co., iii	Plate Glass Hobbs Hardware Co. xiii
de & Co., Fziv	McCausland & Son xi
amson, Jos I rmner, Alex ix man-Hamilton Co iii rrick Co. W & F P xiv rde & Co. F xiv Nally & Co., W IV	McCausland & Son xi Toronto Plate Glass

Brampar Alay	Hedges & Lankin 11
Romanson, Joseph I ix Curric&Co, W. &F. P. xix Curric&Co, W. &F. P. xiv Estate of John Baule a 11yde & Co, F	Tucker & Dillon II
Estate of John Battle A	Heathing. Burroughes & Co. W. J. xi. Clare Bloos
rivde & Co., Fxiv	Romanaha & Ca W L vi
McNally & Co., Wm. IV	Clare Hise
Maguire, Wm iv	Gurney & Co. F. & C. iv
McRse & Ca111	Gaub & Co vii
Morris, E. D iv	Ives & Co., H. R. IV
Morrison & Co., T. A. x	King & Son, Warden, xvi
Rathbun Co viii Strathy & Co. R. L. F. viii Usher & Son, Isaac. ix Wright & Sons, C. B xiv	Manny & Co., E. A., vii
Strathy & Co. R.L.F. viii	McClary Mfg. Coxiii
Usher & Son, Isaac. ix	Miller Bros. & Toms., xiv
Wright & Sons, C. B., xiv	Pease Furnace Co xii
Contractors and	Toronto Radiator Mfg
Builders.	Coxij
Davidean & Valley 11	
Dick, James, sr vi	Iron Fences. Ives & Ca., H. R IV
Dick, James, sr. vi Hood & Co., C. II Hancock, Thos. II Murison & Burge vi Roberts, Wm. II Turner & Co., G. W. xi	
Hancock, Thos II	Iron Pipe. Ives & Co., H. R IV King & Son, Wardenx.v
Murison & Burge. vi	Ives & Co., H. R IV
Roberts, Wm 11	King & Son, Wardenx.v
Turner & Ca., G. W., xi	Laundry Tubs
Contractors' Plant	Forsyth, Robtxin Rice Lews & SonIV
and Machineru	Rice Lews & Son IV
Copland & Co 11	Time and Stone
Rowe, Geo 11	Currie & Co W & F P.viv
Cut Stone Con-	Hyde & Co. F. viv
tractors.	Morris E. D iv
Adamson los 1	Lime and Stone. Currie & Co, W & F P.xiv Hyde & Co., Fxiv Morris, E. Div Wright & Sons, C. B.xiv Legal. Denton, Dads & Den-
Adamson, Jos 1 Curtis & Rowe II Isaac Bros II	Legal.
Isaac Bros 11	Denton, Dods & Den-
Oakley & Holmes II	ton III
Chimmon Tonning	Mantels and Over-
Browner May	mantels.
Chimney Topping. Bremner, Alex ix Currie&Co., W. &F.P.xiv	Millichamp Mfg. Co iv
Drain Pipe	Metallio Lath.
Adamson, Jos I	B. Greening Wire Co. IV
Adamson, Jos ix Bremner, Alex ix Currie & Co., W&F.P.xiv Hamilton and Toronto	Metallic Roofing Co vi
Cume & Co., W&F.P.xiv	Mortar Colors and
Hamilton and Toronto	Shinale Stains.
Sewer Pipe Co ix	Shingle Stains. Maguire, Wm iv
Sewer Pipe Co ix McNally & Co., W IV	Shingle Stains. Alaguire, Wm iv Aluirhead. Andrew i
Sewer Pipe Co. ix McNally & Co., W. IV Maguire, Wm	Shingle Stains. Maguire, Wm iv Muirhead, Andrew i
Sewer Pipe Co. ix McNally & Co., W. IV Maguire, Wm	Shingle Stains. Maguire, Wm iv Muirhead, Andrew i Toronto Pressed Brick
Sewer Pipe Co. ix McNally & Co., W. IV Maguire, Wm v McRae & Co III Milton Pressed Brick	Shingle Stains. Maguire, Wm iv Muirhead, Andrew i Toronto Pressed Brick Coiii
Sewer Pipe Co ix McNally & Co., W. IV Maguire, Wm v McRae & Co 111 Milton Pressed Brick & Sewer Pipe Co ix The Ont. The re-	Shingle Stains. Maguire, Wm iv Muirhead, Andrew i Toronto Pressed Brick Co
McNally & C., W. IV Maguire, Wm v McRae & Co III Milton Pressed Brick & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. wii	Shingle Stains. Maguire, Wm iv Mushead, Andrew i Toronto Pressed Brick Co
McNally & C., W. IV Maguire, Wm v McRae & Co III Milton Pressed Brick & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. wii	Shingle Stains. Maguire, Wm iv Muirhead, Andrew i Toronto Pressed Brick Co
McNally & C., W. IV Maguire, Wm v McRae & Co III Milton Pressed Brick & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. wii	Shingle Stains, Maguire, Wm iv Muirhead, Andrew i Toronto Pressed Brick Co iii Ornamental Plas- terers. Baker, J. D 111 Wright, Jas 111
McNally & C., W. IV Maguire, Wm v McRae & Co III Milton Pressed Brick & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. wii	Shingle Stains, Maguire, Wm iv Muirhead, Andrew i Toronto Pressed Brick Co iii Ornamental Plas- terers. Baker, J. D 111 Wright, Jas 111
McNally & C., W. IV Maguire, Wm V McRae & Co. III Milton Pressed Brick & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamilton Co iii Wright & Sons, C. B., xiv	Shingle Stains. Maguire, Wm iv Muirhead, Andrew i Turonto Pressed Brick Co iii Ornamental Plas. terers. Baker, I. D III Wright, Jas III Paints & Varnishes. Muirhead, Andrew i
McNally & C., W. IV Maguire, Wm V McRae & Co. III Milton Pressed Brick & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamilton Co iii Wright & Sons, C. B., xiv	Shingle Stains. Maguire, Wm iv Muirhead, Andrew i Toronto Pressed Brick Co
McNally & Co., W. IV Maguire, Wm V. Maguire, Wm V. McRae & Co. III Milton Pressed Brick & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamil- ton Co iii Wright & Sons, C. Bxiv Dumb Walters King & Son, Walden xiv	Shingle Stains. Maguire, Wm iv Muirhead, Andrew i Toronto Pressed Brick Co
McNally & C., W. IV Maguire, Wm V. Maguire, Wm V. McRae & Co. III Milton Pressed Brick & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamil- ton Co iii Wright & Sons, C. Bxiv Dumb Watters King & Son, Warden xiv Electric Lighting	Shingle Stains. Maguire, Wm iv Muirhead, Andrew it Toronto Pressed Brick Co
McNally & C., W. IV Maguire, Wm V. McRae & Co. 111 Milton Pressed Brick & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Collam. Hamilton Co	Shingle Stains. Maguire, Wm iv Muirhead, Andrew it Toronto Pressed Brick Co
McNally & C., W. IV Maguire, Wm V McRae & Co. III Milton Pressed Brick & Sewer Pipe Co., ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamil- ton Co iii Wright & Sons, C. B., xiv Dumb Watters King & Son, Warden xiv Recetric Lighting Royal Electric Co I Electrors.	Shingle Stains. Maguire, Wm iv Muirhead, Andrew it Toronto Pressed Brick Co
McNally & C., W. IV Maguire, Wm V McRae & Co. III Milton Pressed Brick & Sewer Pipe Co., ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamil- ton Co iii Wright & Sons, C. B., xiv Dumb Watters King & Son, Warden xiv Recetric Lighting Royal Electric Co I Electrors.	Shingle Stains. Maguire, Wm iv Muirhead, Andrew it Toronto Pressed Brick Co
McNally & C., W. IV Maguire, Wm V McRae & Co. III Milton Pressed Brick & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamiliton Co iii Wright & Sons, C. Bxiv Dumb Watters King & Son, Warden xiv Bleetrife Lighting Royal Electric Co I Elecators Ives & Co., H. R IV	Shingle Stains. Maguire, Wm iv Muirhead, Andrew i Toronto Pressed Brick Co
McNally & C., W. IV Maguire, Wm V. McRae & Co. 111 Milton Pressed Brick & Sewer Pipe Co ix The Ont. Te ra Costra. & Pressed Brick Co. vii The Colman · Hamiliton Co iii Wright & Sons, C. Bxiv Dumb Watters King & Son, Warden xiv Electric Lighting Royal Electric Co I Elecators Ives & Co., H. R IV Leitch & Turnbull. I Engaguers.	Shingle Stains. Maguire, Wm iv Muirhead, Andrew i Toronto Pressed Brick Co
McNally & Co., W. IV Maguire, Wm	Shingle Stains. Maguire, Wm iv Muirhead, Andrew it Toronto Pressed Brick Co
McNally & Co., W. IV Maguire, Wm V McRae & Co III Milton Pressed Brick & & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamiliton Co iii Wright & Sons, C. Bxiv Dumb Watters King & Son, Warden xiv Bleetric Lighting Royal Electric Co I Elecators Ives & Co., H. R IV Leitch & Tumbull. I Engravers. Can. Photo-Eng Bureau.	Shingle Stains. Maguire, Wm iv Muirhead, Andrew i Toronto Pressed Brick Co
McNally & Co., W. IV Maguire, Wm V McRae & Co III Milton Pressed Brick & & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamiliton Co iii Wright & Sons, C. Bxiv Dumb Watters King & Son, Warden xiv Bleetric Lighting Royal Electric Co I Elecators Ives & Co., H. R IV Leitch & Tumbull. I Engravers. Can. Photo-Eng Bureau.	Shingle Stains. Maguire, Wm iv Muirhead, Andrew i Toronto Pressed Brick Co
McNally & Co., W. IV Maguire, Wm V McRae & Co III Milton Pressed Brick & & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamiliton Co iii Wright & Sons, C. Bxiv Dumb Watters King & Son, Warden xiv Bleetric Lighting Royal Electric Co I Elecators Ives & Co., H. R IV Leitch & Tumbull. I Engravers. Can. Photo-Eng Bureau.	Shingle Stains. Maguire, Wm iv Muirhead, Andrew i Toronto Pressed Brick Co
McNally & Co., W. IV Maguire, Wm V McRae & Co III Milton Pressed Brick & & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamiliton Co iii Wright & Sons, C. Bxiv Dumb Watters King & Son, Warden xiv Bleetric Lighting Royal Electric Co I Elecators Ives & Co., H. R IV Leitch & Tumbull. I Engravers. Can. Photo-Eng Bureau.	Shingle Stains. Maguire, Wm iv Muirhead, Andrew iv Muirhead, Andrew iv Toronto Pressed Brick Co
McNally & Co., W. IV Maguire, Wm V McRae & Co III Milton Pressed Brick & & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamiliton Co iii Wright & Sons, C. Bxiv Dumb Watters King & Son, Warden xiv Bleetric Lighting Royal Electric Co I Elecators Ives & Co., H. R IV Leitch & Tumbull. I Engravers. Can. Photo-Eng Bureau.	Shingle Stains. Maguire, Wm iv Muirhead, Andrew iv Muirhead, Andrew iv Toronto Pressed Brick Co
McNally & Co., W. IV Maguire, Wm V McRae & Co III Milton Pressed Brick & & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamiliton Co iii Wright & Sons, C. Bxiv Dumb Watters King & Son, Warden xiv Bleetric Lighting Royal Electric Co I Elecators Ives & Co., H. R IV Leitch & Tumbull. I Engravers. Can. Photo-Eng Bureau.	Shingle Stains. Maguire, Wm iv Muirhead, Andrew iv Muirhead, Andrew iv Toronto Pressed Brick Co
McNally & Co., W. IV Maguire, Wm V McRae & Co III Milton Pressed Brick & & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamiliton Co iii Wright & Sons, C. Bxiv Dumb Watters King & Son, Warden xiv Bleetric Lighting Royal Electric Co I Elecators Ives & Co., H. R IV Leitch & Tumbull. I Engravers. Can. Photo-Eng Bureau.	Shingle Stains. Maguire, Wm iv Muirhead, Andrew iv Muirhead, Andrew iv Toronto Pressed Brick Co
McNally & Co., W. IV Maguire, Wm V McRae & Co III Milton Pressed Brick & & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamiliton Co iii Wright & Sons, C. Bxiv Dumb Watters King & Son, Warden xiv Bleetric Lighting Royal Electric Co I Elecators Ives & Co., H. R IV Leitch & Tumbull. I Engravers. Can. Photo-Eng Bureau.	Shingle Stains. Maguire, Wm iv Muirhead, Andrew iv Muirhead, Andrew iv Toronto Pressed Brick Co
McNally & Co., W. IV Maguire, Wm V McRae & Co III Milton Pressed Brick & & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamiliton Co iii Wright & Sons, C. Bxiv Dumb Watters King & Son, Warden xiv Bleetric Lighting Royal Electric Co I Elecators Ives & Co., H. R IV Leitch & Tumbull. I Engravers. Can. Photo-Eng Bureau.	Shingle Stains. Maguire, Wm iv Muirhead, Andrew iv Muirhead, Andrew iv Toronto Pressed Brick Co
McNally & Co., W. IV Maguire, Wm V McRae & Co. III Milton Pressed Brick & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamiliton Co iii Wright & Sons, C. Bxiv Dumb Watters King & Son, Warden xiv Bleetric Lighting Royal Electric Co I Elecators Ives & Co., H. R IV Leitch & Tumbull. I Engravers. Can. Photo-Eng Bureau iii Fire Brick and Clay Adamson, Jos I Bremner, Alex ix Coman-Hamilton Co iii Curriek Co. W & F P xiv Hyde & Co. F xiv McNally & Co., W. IV Morris, E. D iv Wright & Soas, C. B.xiv	Shingle Stains. Maguire, Wm iv Muirhead, Andrew iv Muirhead, Andrew iv Toronto Pressed Brick Co iii Ornamenital Plas- terers. Baker, I. D III Wright, Jas III Paints & Varnishes. Muirhead, Andrew i Painters. Gilmor & Casey II Paring. McAnthur & Co., Alex x The Guelich Silica Barytic Stone Co III Forsyth, Robert vii Plasterers Il Plasterers Il Plasterers Hynes, W. J I Watson Bros II Plate Glass Hobbs Hardware Coxiii McCansland & Son xi Tromoto Plate Glass Importing Co y
McNally & Co., W. IV Maguire, Wm V McRae & Co. III Milton Pressed Brick & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamiliton Co iii Wright & Sons, C. Bxiv Dumb Watters King & Son, Warden xiv Bleetric Lighting Royal Electric Co I Elecators Ives & Co., H. R IV Leitch & Tumbull. I Engravers. Can. Photo-Eng Bureau iii Fire Brick and Clay Adamson, Jos I Bremner, Alex ix Coman-Hamilton Co iii Curriek Co. W & F P xiv Hyde & Co. F xiv McNally & Co., W. IV Morris, E. D iv Wright & Soas, C. B.xiv	Shingle Stains. Maguire, Wm iv Muirhead, Andrew iv Muirhead, Andrew iv Toronto Pressed Brick Co iii Ornamenital Plas- terers. Baker, I. D III Wright, Jas III Paints & Varnishes. Muirhead, Andrew i Painters. Gilmor & Casey II Paring. McAnthur & Co., Alex x The Guelich Silica Barytic Stone Co III Forsyth, Robert vii Plasterers Il Plasterers Il Plasterers Hynes, W. J I Watson Bros II Plate Glass Hobbs Hardware Coxiii McCansland & Son xi Tromoto Plate Glass Importing Co y
McNally & Co., W. IV Maguire, Wm	Shingle Stains. Maguire, Wm iv Muirhead, Andrew iv Muirhead, Andrew iv Toronto Pressed Brick Co iii Ornamenital Plas- terers. Baker, I. D III Wright, Jas III Paints & Varnishes. Muirhead, Andrew i Painters. Gilmor & Casey II Paring. McAnthur & Co., Alex x The Guelich Silica Barytic Stone Co III Forsyth, Robert vii Plasterers Il Plasterers Il Plasterers Hynes, W. J I Watson Bros II Plate Glass Hobbs Hardware Coxiii McCansland & Son xi Tromoto Plate Glass Importing Co y
McNally & Co., W. IV Maguire, Wm V McRae & Co. III Milton Pressed Brick & Sewer Pipe Co ix The Ont. Te ra Cotta. & Pressed Brick Co. vii The Colman · Hamiliton Co iii Wright & Sons, C. Bxiv Dumb Watters King & Son, Warden xiv Bleetric Lighting Royal Electric Co I Elecators Ives & Co., H. R IV Leitch & Tumbull. I Engravers. Can. Photo-Eng Bureau iii Fire Brick and Clay Adamson, Jos I Bremner, Alex ix Coman-Hamilton Co iii Curriek Co. W & F P xiv Hyde & Co. F xiv McNally & Co., W. IV Morris, E. D iv Wright & Soas, C. B.xiv	Shingle Stains. Maguire, Wm iv Muirhead, Andrew i Toronto Pressed Brick Co

Iron Fences.	Metallic Roofing Co. vi
res & Ca., H. R IV	Hutsor, W. D II
	Rennie P. Son R II
Iron Pipe.	Reggin, J
es & Co., H. R IV	Stewart, W. T 11
ing & Son, Wardenx.v	Toronto Roofing Co., II
Laundry Tubs	Williams & Co., H, 11
orsyth, Robtxin	Santtary Appil.
ice Lews & Son IV	n- dnces
Lime and Stone.	1000111 & Son V
media & Ca W & F P vin	Rooth & Son V Ives & Co., H. RIV Malcolm, W. B iv St. Johns Stone China-
vde & Co. F. viv	Malcolm, W. D IV
yde & Co., Fxiv lorris, E. Div right & Sons, C. Bxiv Legal.	or. Johns Stone China.
right & Sons. C. B.,xiv	ware Coiii Shingle Stains
Legal.	Cabot, Samuel i
enton, Dods & Den-	
ton 111	Sliding Blinds
Mantels and Over-	The Wm. Cane & Sons
mantels.	Mig. Coxiv
illichamp Mig. Co iv	Stained and Decora-
	tive Glass
Metallio Lath.	Castle & Son v
Greening Wire Co. IV	Dominion Stained Glass
letallic Roofing Co vi	Elliott & Son I
Mortar Colors and	Elliott & Son I
Shinale Stains.	Faircloth Bros y
aguire, Wm iv	Gitson Bros. Stained
uirhead, Andrew i	Glars Works v
ntouto tressed mick	Grimson, G. & J. E v Hobbs Hardware Co., xiii
Co iii	Imperial Stained Glass
Ornamental Plas.	Cov
terers.	Longhunt & Co., H., y
aker, J. D111	McCausland & Son v
right, JasIII	Spence & Son, J. C v
aints & Varnishes.	Victoria Stained Glass
uirhead, Andrew i	Co
Painters.	Terra Cotta
ilmor & Casey II	Morrison & Co., T. A.111 Toronto Pressed Brick
Paving.	to Toron Costs Co :::
cArthur & Co., Alex x he Guelich Silica	& Terra Corta Co iii The Ont. Terra Corta
he Guelich Silica	_ & Brick Co zi
Barytic Stone CoIII	The Raritan Hollow &
orsyth, Robertvii	Porous Brick Co, viii
Pipe Covering	Terra Colla Fire
an. Mineral Wool Co. ii	
Plasterers	proofing Morrison & Co., T. A.III
voes. W. I I	Rathbun Coviii
ynes, W. J I atson Bros II	The Raritan Hollow &
Plate Glass	Porous Brick Co viii
obbs Hardware Co. xiii	Porous Brick Co, viii Wall Paper and
cCausland & Son xi	Celling Decorations
oronto Plate Glass	Elliott & Son II
Importing Co	Faircioth Bros A
Planshers	Staunton & Co

11	Imperial Stained Glass
	_ Co,v
1	Longhunt & Co., H., v
Ī	McCausland & Son v
_	Spence & Son, J. C v
ī.	Victoria Stained Glass
i	Co ▼
	Terra Cotta
1	Morrison & Co., T. A.III
_	Toronto Pressed Brick
×	& Terra Corta Co iii
	The Ont. Terra Cotta
ı	& Brick Co xi
iì	The Raritan Hollow &
••	Porous Brick Coviii
	Terra Cotta Fire-
ii	proofing
	Morrison & Co., T. A. III
I	Rathbun Co viii
I I	The Raritan Hollow & Porous Brick Co, viii
	Porous Brick Co, viii
iii	Wall Paper and
хi	Celling Decorations
	Elliott & Son II
	Faircloth Bros v
	Staunton & Co v
II	Wall-Plaster
vi	Adamant Mfg. Co. of
Vi	Americavii Strathy & Co., R. L. F. viii
¥1	Stratiny or Co., K. L. F. WILL